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ABSTRACT

In order to eliminate the causes of deterioration due to the properties of the copper-made negative electrode current collector of a lithium secondary batter, the battery produced so as to have needle-like projections on its surface by a process comprising a step of forming a whisker-like copper oxide on the surface of a thin copper plate to which a negative electrode active material adheres, and then reducing the whole or part of said copper oxide by a chemical or electrical treatment, and if necessary, a step of nickel-plating said surface, overcomes the above defects and has excellent charge and discharge cycle performance.